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06CS/IS833

Eighth Semester B.E. Degree Examination, June/July 2013

Storage Area Networks

Time: 3 hrs.

Max. Marks:100

Note: Answer FIVE full questions, selecting at least TWO questions from each part.

PART – A

- 1 a. Differentiate storage-centric IT architecture from server-centric IT architecture. (10 Marks)
b. Briefly discuss the benefits of storage networks on business applications. (10 Marks)
- 2 a. With a neat diagram, explain the architecture of intelligent disk storage system. (06 Marks)
b. Describe the I/O techniques used in disk storage system in order to increase fault-tolerance of systems. (06 Marks)
c. How RAID 0 + 1 and RAID 1 + 0 are different? Explain. Why RAID 0 is not an option for data protection and high availability? Justify. (08 Marks)
- 3 a. Explain the following functions offered by intelligent disk subsystems:
i) instant copy ii) remote mirroring iii) LUN masking. (12 Marks)
b. List the various measures that are considered in disk subsystems to increase the availability of data. (08 Marks)
- 4 a. Explain the various topologies used in realizing fibre channel SAN. (12 Marks)
b. With block diagrams, explain the generic layout of NAS hardware and software components. (08 Marks)

PART – B

- 5 a. With a neat sketch, explain the components of network attached storage. (08 Marks)
b. Explain how several computers can access files simultaneously using shared disk file systems. (06 Marks)
c. Write short notes on DAFS. (06 Marks)
- 6 a. What is storage virtualization? How is it achieved on block level and on file level? Explain. (10 Marks)
b. Discuss how storage virtualization is achieved in the network. Explain symmetric and asymmetric storage virtualization. (10 Marks)
- 7 a. Write short notes on fibre channel switch. (08 Marks)
b. What is HBA? Explain its basic functions. (06 Marks)
c. Explain briefly fibre channel RAID. (06 Marks)
- 8 a. Describe the components of switch operating system, in detail. (08 Marks)
b. What is business continuity? Discuss the role of storage network in business continuity. (12 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.